

REMARKS

This application has been revised in light of the Final Office Action mailed on March 1, 2005. Claims 20-36 are pending in the application with claims 20 and 31 being in independent form. By the present Amendment, claims 20-24, 26-29, 31-33 and 36 have been amended in part. Specifically, Applicants now recite introducing a thermal transmitting element of a thermal probe into the outer annulus fibrosus and also recite that the thermal transmitting element of the thermal probe does not contact the nucleus pulposus. The application as filed supports these recitations, specifically on page 6, line 13 and FIG. 1, respectively. Accordingly, no new matter is believed to be introduced by the amendments. In view of the amendments above and the remarks to follow, reconsideration and allowance of this application are respectfully requested.

Claim Rejection under 35 U.S.C. § 112

In the Office Action, Claims 31-36 were rejected under 35 U.S.C. §112 first paragraph as failing to comply with the enablement requirement. Applicants have hereby amended Claim 31 to remove the words “puncture and” from the claim language. Therefore, reconsideration of the rejection under 35 U.S.C. § 112, first paragraph is respectfully requested and allowance of the claims is earnestly solicited.

Claim Rejections under 35 U.S.C §102

Claims 20-25 and 29-32 were rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,126,682 to Sharkey et al. With regard to independent Claim 20 and Claims 21-25 and 29-30 which depend therefrom, Sharkey et al. do not teach or suggest introducing a thermal transmitting element of a thermal probe into the outer annulus fibrosus of the

intervertebral disc while the thermal transmitting element of the thermal probe does not contact the nucleus pulposus, as recited in amended Claim 20.

In contrast, the catheter disclosed by Sharkey et al. enters the intervertebral disc in the nucleus pulposus via an introducer (col. 9, lines 23-26; and FIG. 4). Since the catheter of Sharkey et al. enters the intervertebral disc in the nucleus pulposus and because “the distal portion 28 of intradiscal section 16 [of catheter 14] is designed to be incapable of piercing the annulus fibrosus 122 (col. 11, lines 21-22),” it can be appreciated that the catheter cannot enter the outer annulus fibrosus upon exiting the introducer in the nucleus pulposus. Rather, the catheter of Sharkey et al. is designed to be “navigated along inner wall 22 of annulus fibrosus 122 (col. 11, lines 16-17) (emphasis added).”

Accordingly, Claim 20 and Claims 21-25 and 29-30, which depend therefrom, are believed to be patentably distinct over Sharkey et al. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of the Claims is earnestly solicited.

With regard to independent Claim 31 and Claim 32 which depends therefrom, Sharkey et al. do not teach a method where a thermal probe is initially exposed to the outer annulus fibrosus upon exiting a cannula, as recited in amended Claim 31. Further, Applicants disclose a method of introducing a thermal probe into the outer annulus fibrosus and advancing the thermal probe within the outer annulus pulposus.

In contrast, the method disclosed by Sharkey et al. includes introducing the catheter into the nucleus pulposus and advancing the catheter along the inner wall of the annulus fibrosus, without puncturing the inner wall of the annulus fibrosus. Therefore, because the catheter of Sharkey et al. is initially placed in the nucleus pulposus and because it cannot pierce the annulus fibrosus (col. 11, lines 21-22), the catheter can not enter the outer annulus fibrosus, as Applicants recite in amended Claim 31.

Accordingly, Claim 31 and Claim 32, which depends therefrom, are believed to be patentably distinct over Sharkey et al. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of the Claims is earnestly solicited.

The apparatus and method disclosed by Applicants represent “a more direct approach to the posterior/lateral portions of the disc than a more circuital approach involving delivering a probe into the center of the disc [nucleus pulposus] and then arcing the probe around through an anterior or anterior-lateral pathway” (page 14, lines 10-12).

Claim Rejection under 35 U.S.C. § 103

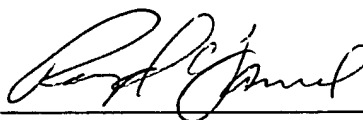
Claims 26-28, 33 and 34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sharkey et al. in view of U.S. Patent No. 5,084,043 to Hertzmann et al. It is respectfully submitted that Claims 26-28, 33 and 34 are patentable for at least the reasons that independent Claims 20 and 31 are patentable, as discussed hereinabove. Therefore, reconsideration and withdrawal of the rejection is respectfully requested and allowance of the claim is earnestly solicited.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that all claims presently pending in the application, namely claims 20-36, are believed to be in condition for allowance and patentably distinguishable over the art of record. Accordingly, early and favorable consideration of this application is respectfully requested.

If the Examiner should have any questions concerning this communication or feels that an interview would be helpful, he is requested to call the Applicant's undersigned attorney.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Ray E. Farrell", written over a horizontal line.

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